



Fig. 5 Nucleotide sequence encoding SAK 1 protein

GAACCTTAAGGAAGATATACATATGTCAAGTTCATTCGACAAAGGAAAATA,
TAAAAAGGGCGATGACGCGAGTTATTTTGAACCAACAGGCCCGTATTTGAT
GGTAAATGTGACTGGAGTTGATGGTAAAGGAAATGAATTGCTATCCCCTCA
5 TTATGTCGAGTTTCCTATTAAACCTGGGACTACACTTACAAAAGAAAAAAT
TGAATACTATGTCTGAATGGGCATTAGATGCGACAGCATATAAAGAGTTTA
GAGTAGTTGAATTAGATCCAAGCGCAAAGATCGAAGTCACTTATTATGATA
AGAATAAGAAAAAAGAAGAAACGAAGTCTTTCCTATAACAGAAAAAGGT
TTTGTTGTCCCAGATTTATCAGAGCATATTAAAAACCCTGGATTCAACTTA
10 ATTACAAAGGTTGTTATAGAAAAGAAATAAAACAAAATAGTTGTTTATTAT
AGAAAGTAATGTCTTGATTGAATATGTGTAGTGAAATTATCTTTCATCAAA
TTCTCATTTCATGCACGAATGGTTCTGCCCCACCTAATCAGATATTACGTGA
CTTATGGGGAGAAATCAGTTTGGATAAAAAGTGGAGGATCCAGTAGCCG (

606 nucleotides)

15 Oligo's :

SAK-3 primer :

5'- GAACCTTAAGGAAGATATACATATGTCAAGTTCATTCGACAAAGGA-3'
(45 mer)

SAK-2 primer :

20 5'- CGGCTACTGGATCCTCCACTTTTATCCAAACTGATTT -3' (38 mer)

Fig. 6 Nucleotide sequence encoding SAK-2 protein

GAACTTAAGCAT ATGAAAGGAAAATATAAAAAGGGCGATGACGCGAGTTA
TTTTGAACCAACAGGCCCGTATTTGATGGTAAATGTGACTGGAGTTGATGG
TAAAGGAAATGAATTGCTATCCCCTCATTATGTCGAGTTTCCTATTAAACC
5 TGGGACTACACTTACAAAAGAAAAAATTGAATACTATGTCGAATGGGCAT
TAGATGCGACAGCATATAAAGAGTTTAGAGTAGTTGAATTAGATCCAAGC
GCAAAGATCGAAGTCACTTATTATGATAAGAATAAGAAAAAAGAAGAAAC
GAAGTCTTTCCTATAACAGAAAAAGGTTTTGTTGTCCCAGATTTATCAGA
GCATATTAAAAACCCTGGATTCAACTTAATTACAAAGGTTGTTATAGAAAA
10 GAAA TAAACAAAATAGTTGTTTATTATAGAAAGTAATGTCTTGATTGAAT
ATGTGTAGTGAAATTATCTTTCATCAAATTCTCATTCATGCACGAATGGTTC
TGCCCCACCTAATCAGATATTACGTGACTTATGGGGAGAAATCAGTTTGGA
TAAAAGTGGAGGATCCAGTAGCCG (582 nucleotides).

Oligo's :

15 SAK-4 primer :

5'- GAACTTAAGCATATGGCTGGAGCTTATAAAAAGGGC -3' (36 mer)

SAK-2 primer :

2. 5'- CGGCTACTGGATCCTCCACTTTTATCCAAACTGATTT -3' (37 mer)

Fig. 10 Sequences encoding of SAK, SAK-1 and SAK-2 proteins

SAK TCAAGTTCATTTCGACAAAGGAAA
SAK-1 GAACTTAAGGAAGATATACATATGTCAAGTTCATTTCGACAAAGGAAA
SAK-2 GAACTTAAGCATATG g c tGGA gc

SAK ATATAAAAAGGGCGATGACGCGAGTTATTTTGAACCAACAGGCCCGT
SAK-1 ATATAAAAAGGGCGATGACGCGAGTTATTTTGAACCAACAGGCCCGT
SAK-2 t TATAAAAAGGGCGATGACGCGAGTTATTTTGAACCAACAGGCCCGT

SAK ATTTGATGGTAAATGTGACTGGAGTTGATGGTAAAGGAAATGAATTG
SAK-1 ATTTGATGGTAAATGTGACTGGAGTTGATGGTAAAGGAAATGAATTG
SAK-2 ATTTGATGGTAAATGTGACTGGAGTTGATGGTAAAGGAAATGAATTG

SAK CTATCCCCTCATTATGTCGAGTTTCCTATTAAACCTGGGACTACACT
SAK-1 CTATCCCCTCATTATGTCGAGTTTCCTATTAAACCTGGGACTACACT
SAK-2 CTATCCCCTCATTATGTCGAGTTTCCTATTAAACCTGGGACTACACT

SAK TACAAAAGAAAAAATTGAATACTATGTCTGAATGGGCATTAGATGCGA
SAK-1 TACAAAAGAAAAAATTGAATACTATGTCTGAATGGGCATTAGATGCGA
SAK-2 TACAAAAGAAAAAATTGAATACTATGTCTGAATGGGCATTAGATGCGA

SAK CAGCATATAAAGAGTTTATAGAGTAGTTGAATTAGATCCAAGCGCAAAG
SAK-1 CAGCATATAAAGAGTTTATAGAGTAGTTGAATTAGATCCAAGCGCAAAG
SAK-2 CAGCATATAAAGAGTTTATAGAGTAGTTGAATTAGATCCAAGCGCAAAG

SAK ATCGAAGTCACTTATTATGATAAGAATAAGAAAAAAGAAGAAACGAA
SAK-1 ATCGAAGTCACTTATTATGATAAGAATAAGAAAAAAGAAGAAACGAA
SAK-2 ATCGAAGTCACTTATTATGATAAGAATAAGAAAAAAGAAGAAACGAA

SAK GTCTTTCCCTATAACAGAAAAAGGTTTTGTTGTCCCAGATTTATCAGA
SAK-1 GTCTTTCCCTATAACAGAAAAAGGTTTTGTTGTCCCAGATTTATCAGA
SAK-2 GTCTTTCCCTATAACAGAAAAAGGTTTTGTTGTCCCAGATTTATCAGA

SAK GCATATTAAAAACCCTGGATTCAACTTAATTACAAAGGTTGTTATAG
SAK-1 GCATATTAAAAACCCTGGATTCAACTTAATTACAAAGGTTGTTATAG
SAK-2 GCATATTAAAAACCCTGGATTCAACTTAATTACAAAGGTTGTTATAG

SAK AAAAGAAATAA
SAK-1 AAAAGAAATAAAACAAAATAGTTGTTTATTATAGAAAGTAATGTC
SAK-2 AAAAGAAATAAAACAAAATAGTTGTTTATTATAGAAAGTAATGTC

SAK-1 TTGATTGAATATGTGTAGTGAAATTATCTTTCATCAAATTCTCATT
SAK-2 TTGATTGAATATGTGTAGTGAAATTATCTTTCATCAAATTCTCATT

SAK-1 CATGCACGAATGGTTCTGCCCCACCTAATCAGATATTACGTGACT
SAK-2 CATGCACGAATGGTTCTGCCCCACCTAATCAGATATTACGTGACT

SAK-1 TATGGGGAGAAATCAGTTTGGATAAAAAGTGGAGGATCCAGTAGCC
SAK-2 TATGGGGAGAAATCAGTTTGGATAAAAAGTGGAGGATCCAGTAGCC

SAK-1 G
SAK-2 G

Fig. 11 Modification of SAK in SAK-2

	1	10	20	30	40
SAK	SSSFDKGGKTKKGDDASYFEPTGPYLMVNVVTGVDGKGKNELLSPHYVEFP				
SAK-2	AGATKKGDDASYFEPTGPYLMVNVVTGVDGKGKNELLSPHYVEFP				
	50	60	70	80	90
SAK	IKPGTTLTKEKIEYYVEWALDATAYKEFRVVELAPSAKIEVTYYDKNKK				
SAK-2	IKPGTTLTKEKIEYYVEWALDATAYKEFRVVELAPSAKIEVTYYDKNKK				
	100	110	120	130	136
SAK	EETTKSFPITEKGFVVPDLSEHIKNPGFNLITKVVIEKK				
SAK-2	EETTKSFPITEKGFVVPDLSEHIKNPGFNLITKVVIEKK				